Harmonising postgraduate medical education in Europe

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Chapter 4

What European gynaecologists need to master: consensus on medical expertise outcomes of pan-European postgraduate training in Obstetrics & Gynaecology

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Abstract

Objective: European harmonisation of training standards in postgraduate medical education in Obstetrics and Gynaecology is needed because of the increasing mobility of medical specialists. Harmonisation of training will provide quality assurance of training and promote high quality care throughout Europe. Pan-European training standards should describe medical expertise outcomes that are required from the European gynaecologist. This paper reports on consensus development on the medical expertise outcomes of pan-European training in Obstetrics and Gynaecology.

Study Design: A Delphi procedure was performed amongst European gynaecologists and trainees in Obstetrics & Gynaecology, to develop consensus on outcomes of training. The consensus procedure consisted of two questionnaire rounds, followed by a consensus meeting. To ensure reasonability and feasibility for implementation of the training standards in Europe, implications of the outcomes were considered in a working group thereafter. We invited 142 gynaecologists and trainees in Obstetrics & Gynaecology for participation representing a wide range of European countries. They were selected through the European Board & College of Obstetrics and Gynaecology and the European Network of Trainees in Obstetrics & Gynaecology.

Results: Sixty people participated in round 1 and 2 of the consensus procedure, 38 (63.3%) of whom were gynaecologists and 22 (36.7%) were trainees in Obstetrics & Gynaecology. Twenty-eight European countries were represented in this response. Round 3 of the consensus procedure was performed in a consensus meeting with six experts. Implications of the training outcomes were discussed in a working group meeting, to ensure reasonability and feasibility of the material for implementation in Europe. The entire consensus procedure resulted in a core content of training standards of 188 outcomes, categorised in ten topics.

Conclusion: European consensus was developed regarding the medical expertise outcomes of pan-European training in Obstetrics and Gynaecology. The outcomes will be described in core trainings standards, aimed at harmonising training in Obstetrics and Gynaecology in Europe to promote high quality care.

Introduction

The mobility of doctors in Europe has increased significantly over the past few decades.[1-3] To illustrate this, the United Kingdom's (UK) General Medical Council reported that in 2016, 17.0% of medical specialists registered in the UK had received medical training in another country of the European Union (UK excluded).[4] Within the European Union, all countries have mutually recognised training qualifications for graduate and postgraduate medical education (PGME).[5] This mutual recognition relies on superficial harmonisation of minimum requirements, for instance regarding training site (university or medical teaching hospital) and duration of training.[5-7] The Union Européenne des Médicins Specialistes (UEMS) delivered guiding principles for PGME programmes in Europe, following which the European Board and College of Obstetrics and Gynaecology (EBCOG) has developed training standards, but implementation has fallen short.[8] There is reason to believe that PGME and its outcomes still vary substantially in Europe. Surveys among European trainees in Obstetrics & Gynaecology (OBGYN) report differences in the level of experience at entry to OBGYN training, differences in additional mandatory training (e.g. in general surgery or general oncology) and differences in final examinations.[9] This is unfavourable in view of the increasing mobility of medical specialists. Harmonisation of PGME standards in Europe will ensure the quality of training and may also enhance the harmonisation of standards of care. Assured quality of training will allow safe mobility of medical specialists, thus promoting safe patient care.

The need for harmonisation of PGME in Europe is recognised by several medical specialties.[10-15] EBCOG recently initiated the development of a pan-European curriculum in OBGYN, attending strategies for implementation as well.[16, 17] To develop training standards for harmonisation, it is essential to understand what medical expertise is required of the European gynaecologist and thus what the outcomes of training should be.[18] To ensure successful implementation of the training standards, medical expertise outcomes must be reasonable for all European countries and thus may be developed by consensus.[17] Currently, some subjects are considered mandatory in OBGYN training in some countries while they are not being trained in others, for instance Breast Disease. Pan-European training should respect these differences while providing a standard for the outcomes, the duration and subjects of training. Therefore, the standards may include a mandatory core (shared by all trainees) as well as complementary elective modules in different subjects (chosen by a few or many).[19] The core ensures quality of training at a standardised level, while elective modules allow for variation between trainees in their fields of interest. Electives may answer to personal and local needs and local infrastructure, as in the case of Breast Disease, or may be a first step towards sub-specialisation after PGME.

In this study, we aim to determine the medical expertise outcomes of pan-European training in OBGYN by reaching European consensus.

Methods

Consensus procedure

We considered a Delphi procedure to be the most appropriate consensus procedure for this study, since it allows a large group of people to participate, even if they are geographically dispersed and time and finances are limited.[20] Furthermore, participants are anonymous, which reduces the influence of group dynamics on the results.[21] We performed the procedure with some modifications to a classic Delphi, to best fit the purpose of the present research. Literature shows no consistency in the definition of a 'modified Delphi', therefore we described every step with potential modifications and provided a rationale for each decision.[22] In this Delphi procedure, we performed round 1 and 2 of opinion formation through a digital questionnaire and round 3 in an expert panel consensus meeting. After consensus was reached on the medical expertise outcomes, the reasonability and feasibility of the proposed content for implementation in Europe were discussed in a working group.

Literature reports a great variation in consensus criteria, since this depends on the context of the research.[21-24] In this study, the distribution of answers to the questionnaire is expressed in percentages, since we used a categorical scale for assessment (inclusion in core training, inclusion in elective training or exclusion from training).[25] Consensus was therefore defined (a priori) as ≥70% of the participants having expressed the same answer. If consensus was reached on an outcome, it was excluded from re-evaluation in the next Delphi round. We aimed to achieve consensus on all topics.

For the consensus procedure, a questionnaire was designed that included all the relevant topics within the scope of OBGYN. We collected input from several documents describing OBGYN subjects from an educational and a European perspective. These documents were (1) the training standards developed by EBCOG,[26, 27] (2) literature on European training curricula in other medical specialties,[28, 29] and (3) the recently modernised Dutch training curriculum in OBGYN.[30] We primarily identified ten major topics in the field of OBGYN for which outcomes of training were described (see table 1). For instance, the topic 'Intrapartum & Postpartum Care' included outcomes such as 'performs physical examination to determine feasibility of labour' and 'diagnoses and treats intrapartum fever'. For each outcome, participants were asked if this should be 'trained in the core', 'trained in an elective', 'only in subspecialty training' or 'not trained at all'. To ensure completeness of topics and outcomes in the questionnaire, participants could suggest new outcomes in qualitative comments. Also, participants could provide qualitative comments to indicate possible misinterpretations. The qualitative comments were leading in the adjustment of the questionnaire for subsequent rounds and newly suggested outcomes were added if they were reported at least twice in one round.[25] The questionnaire was developed in English and was internet-based for wide accessibility. It was mainly developed by one researcher (JA), who is a medical doctor with a special interest in OBGYN and a scientific researcher in Medical Education. Advice was given by six gynaecologists (FS, AG, AT, CB, JF, PV) from various European countries, who are involved in the development of a pan-European curriculum in OBGYN.[16]

Round 1 of opinion formation was performed between January 2016 and May 2016. Following this round, anonymised feedback reflecting the group's opinions was sent to all participants. This Delphi characteristic of providing feedback to participants promotes convergence of the group's opinions throughout the process and thus facilitates the gradual formation of consensus.[20, 24, 31] The results of round 1 were analysed to develop the questionnaire for round 2, which was performed between July

2016 and October 2016 and followed by feedback to all participants. Since we expected that a third round with another questionnaire might result in a severe drop in response rate, yielding only a slight increase in additional consensus, we decided a priori that round 3 should consist of an expert panel consensus meeting.[22] This meeting took place in Turin on 15 October 2016. The panel consisted of six gynaecologists, two from the Netherlands, two from the Czech Republic and two from Italy, who had also participated in the previous rounds. They discussed all the outcomes on which no consensus had been reached so far and voted which outcomes to include in training. Consensus was reached if at least four out of six panellists agreed on the inclusion or exclusion of an outcome. Opinion formation was led by feedback from round 2 of the procedure. After round 3, the outcomes were edited textually and structured into an educational framework by two researchers (JA and FS).

Next, the implications of the outcomes were discussed in a working group, to ensure reasonability and feasibility of the material for implementation in Europe. The working group consisted of five trainees and thirteen gynaecologists, representing twelve European countries.

Table 1: Number of medical expertise outcomes per topic per round of the Delphi procedure.

	Topic	No. of outcomes in round 1	No. of outcomes in round 2	Final no. of outcomes in core content
A	General Medical Knowledge & Skills	57	11	12
B	Prenatal Care	141	25	44
C	Intrapartum & Postpartum Care	40	14	29
D	Benign Gynaecology*	22	8	45*
E	Reproductive Medicine	40	23	13
	Surgical Skills	92*	34*	*
F	Urogynaecology & Pelvic Floor	31	29	11
G	Premalignancy	#	#	7#
H	Gynaecology Oncology	36	28	9
I	Paediatric Gynaecology & Sexual Health	22	20	13
J	Breast Disease	56	39	5
	Total	**537**	**231**	**188**

**= During the Delphi procedure, 'Surgical Skills' was considered a separate topic. In the final description of the core content they are placed under the other topics. Most surgical outcomes are described in the topic 'Benign Gynaecology'.*

#= During the Delphi procedure, 'Premalignancy' was considered a part of 'Gynaecology Oncology'. In the final description of the core content it is a separate topic.

Participants

Participants were purposefully selected based on two criteria: (1) every participant works as a gynaecologist or trainee in OBGYN (2) and the entire group of participants is drawn from a diverse geographical area in Europe (at least 20 European countries). Both gynaecologists and trainees were selected in line with the participatory approach of the study, which is to include the primary stakeholders in PGME. Participants were recruited through EBCOG and the European Network of Trainees in Obstetrics and Gynaecology (ENTOG). EBCOG represents professional and scientific OBGYN societies from 36 European countries and ENTOG represents OBGYN trainee societies from 30 European countries. Participants were informed about the aims of the study at EBCOG and ENTOG Council meetings and were invited by email to participate.

Analysis

The questionnaire was developed with Qualtrics 2015, Provo, Utah, USA. This online program also analysed the distribution of answers in percentages. Outcomes and qualitative comments were interpreted and discussed by two researchers (JA and AT). The results of round 3 were analysed during the consensus meeting (see figure 1).

Ethical considerations

This study was approved in 2015 by the Ethical Review Board of the Netherlands Association for Medical Education (NVMO-ERB file number 617). All participants gave their written consent for participation. One researcher (JA) had access to the original data, and all research material was coded to guarantee anonymity. If participants withdrew from participation during the study, their input could not be eliminated if it had already been processed in the consensus procedure.

Results

The questionnaire of round 1 included ten OBGYN topics describing 537 medical expertise outcomes. Figure 1 illustrates the process of the Delphi over time. In total, 142 gynaecologists and trainees were invited for participation, six of whom actively opted out, six suggested another participant and 58 were unresponsive. Seventy-two people participated in round 1, 46 (63.9%) of whom were gynaecologists and 26 (36.1%) were trainees in OBGYN. Between round 1 and round 2, twelve participants were lost without giving reasons, four of whom actively opted out and eight were unresponsive to reminders. Sixty people participated in round 2, 38 (63.3%) of whom were gynaecologists and 22 (36.7%) were trainees in OBGYN. They represented 28 European countries. Figure 2 and table 2 depict the geographical representation of all participants, table 3 depicts the diversity in the participants' professional areas of interest.

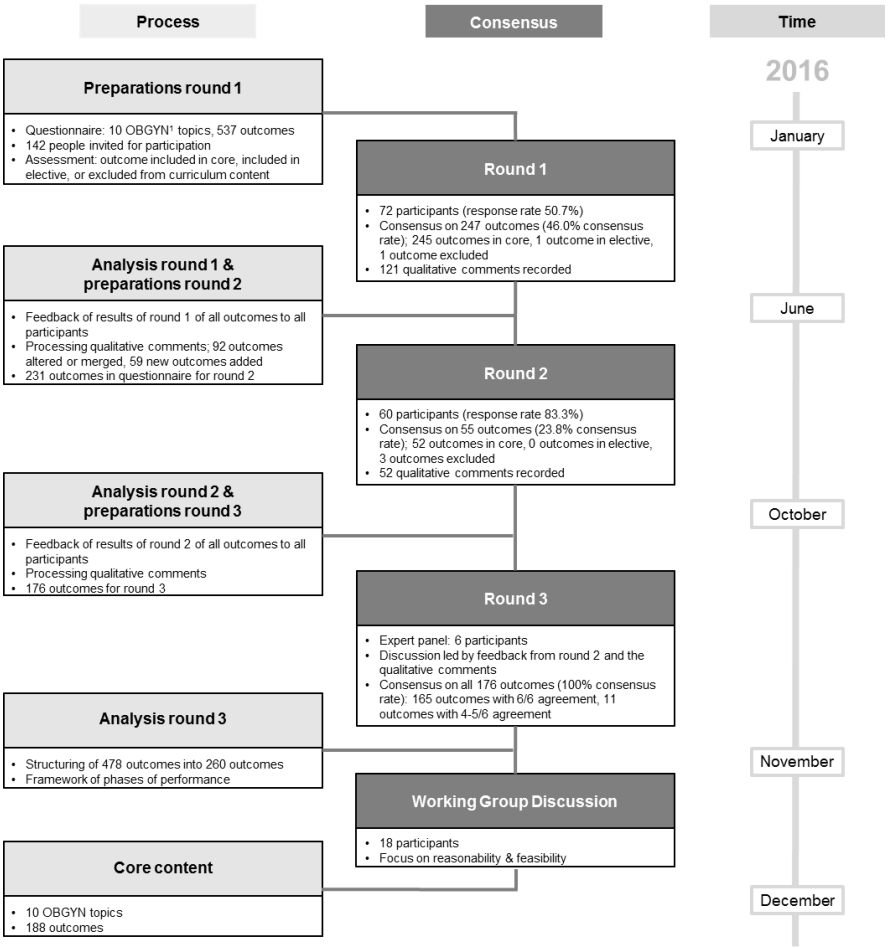
In round 3 of the consensus procedure, an expert panel evaluated and discussed the feedback from round 2, striving to comprehend the opinions of the majority of participants concerning outcomes that had not fully reached the consensus criterion. Majority percentages of round 2 were leading in the expert panel's votes to include or exclude these undecided outcomes in training. It was acknowledged that some of the remaining undecided outcomes had been addressed in questions that were ambiguous. The expert panel discussions led to group consensus on all remaining outcomes.

The consensus procedure resulted in a core content of training standards of 188 outcomes, categorised in ten topics. The majority of the outcomes lay within the topics 'Prenatal Care', 'Intrapartum & Postpartum Care' and 'Benign Gynaecology'. Table 1 presents the topics and the number of medical expertise outcomes per topic per round of the consensus procedure. Table 4 (Addendum) shows all medical expertise outcomes to be included in the core of pan-European training.

For certain medical procedures, qualitative comments in round 1 and 2 showed that participants considered it reasonable to train them in the core, but felt that it might not be feasible to insist on in vivo training due to low incidence of these procedures. In round 3, it was determined by group discussion that these procedures must be trained in the core, but with the added qualification 'at least in simulation', to ensure the possibility of training without being restricted by low incidence (see table 4 in addendum). Consensus showed that abdominal hysterectomy should be trained in the core.

At the working group meeting, reasonability and feasibility of the proposed core content regarding implementation in Europe were discussed, this did not lead to any major adjustments in the core content.

Figure 1: Delphi procedure to develop consensus on the medical expertise outcomes of pan-European training in Obstetrics & Gynaecology.



[1] = *Obstetrics & Gynaecology*

Figure 2: Geographical representation of participants in round 2 of the Delphi procedure.


Gynaecologist and Trainee represented
Gynaecologist represented
Trainee represented
not represented

Table 2: Regional representation of participants in round 2 of the Delphi procedure.

Area of Europe	Gynaecologists	Trainees	Total
Scandinavia	5	4	**9**
Eastern Europe	13	6	**19**
Southern Europe	8	5	**13**
North-Western Europe	12	7	**19**
Total	**38**	**22**	**60**

Table 3: Professional diversity of participants in round 1 of the Delphi procedure.

Area of special interest (reported in round 1)	Reported by number of participants* (n=72)
General obstetrics & gynaecology	4
General gynaecology & gynaecological surgery	5
Perinatology / feto-maternal medicine / obstetrics	14
Gynaecological Oncology	7
Reproductive Medicine	8
Endoscopy / minimal invasive surgery / laparoscopic surgery	8
Urogynaecology	1
Ultrasound	2
Psychosomatics	2
Paediatric & adolescent gynaecology	2

** = 1-2 areas of special interest were reported per participant.*

Comment

This paper describes the medical expertise outcomes that should be trained in the core of pan-European training in OBGYN, according to a broad sample of European gynaecologists and trainees. The content for elective training has not been developed in this study. The most prominent finding of this study is that development of consensus on required outcomes of training for all European gynaecologists has been realised, despite great diversity in background of the participants in the procedure. We also found that general gynaecology and obstetrics should make up a major part of the core training of European gynaecologists.

We believe that the methods chosen in this study are well suited to the aim of developing consensus at the European level. We have been able to receive input from gynaecologists and trainees representing a wide geographical reach. The number of participants included in this study is in concordance with previously conducted consensus procedures regarding harmonisation of postgraduate training in Europe.[15, 17] Trainees were included as participants in round 1 and 2, since they are the primary stakeholders in PGME and therefore may have a valuable perspective on reasonability and feasibility of training standards. Due to unfortunate timing, no trainees took part in round 3 of the procedure.

A limitation is that the perspective of the patient was not represented in the consensus procedure. Patients' perspectives represent societal needs and consideration of this in development of training standards may strengthen them beyond medical expertise. We will include the patient's perspective in subsequent steps in the process of curriculum design (e.g. the development of a competency framework).

A meeting similar to the final working group meeting is rare in Delphi procedures, but it was considered relevant in this study considering the European context. With regard to implementation of the training standards throughout Europe, reasonability and feasibility of the outcomes are essential and therefore both were evaluated thoroughly to include perspectives from a variety of European backgrounds.

Regarding implications of the results, we acknowledge that implementation of pan-European standards may rely on local or national circumstances. Incidences of instrumental vaginal deliveries, vaginal breech deliveries and caesarean sections vary between European countries, affecting the numbers of performances for trainees.[32] Training of abdominal hysterectomy was determined to be part of the core training. Due to decline in incidence of the procedure in various countries such as the Netherlands, sufficient in vivo training may not be guaranteed.[33] Therefore, simulation training methods will likely become increasingly important in ensuring training of procedures with low volume of practice. This is in line with a broader discussion on decreasing exposure of medical specialists and trainees to certain procedures in relation to the quality and accessibility of care that is being delivered. Declining incidence of specific procedures may lead to (a) fewer specialists performing a procedure more frequently, but potentially jeopardizing accessibility of care, or (b) more general specialists performing a procedure less frequently with a minimum quality standard and better access for patients. This is an active and complex discussion and the results of this study add to the importance of it. The margins of the generality of the gynaecologist in Europe may be up for discussion and addressed differently throughout Europe in order to be optimally executable in local circumstances

and healthcare systems. Through this study we aim to initiate the dialogue on these issues from the training perspective.

This consensus procedure is a first step in the development of training standards aimed to harmonise OBGYN training in Europe. It is likely that, due to local habits and needs, some elements of the standards (e.g. colposcopy) may be variously executable in different contexts and this may even change over time. Therefore, an ever-continuing process of improvement of the standards will emerge, according evolvement of OBGYN and PGME practices. Continuous evaluation of the standards and its implementation is essential to establish sustainability of high quality pan-European training in OBGYN.

Although the scope of the study was within Europe, the implications of the study may reach beyond Europe alone. European training standards may serve as a reference for International Medical Graduates, pursuing a career in OBGYN in Europe.

In conclusion, consensus was reached amongst European gynaecologists and trainees regarding the medical expertise that is required of a European gynaecologist. Future studies could focus on a European perspective on professional competencies and education strategies for further curriculum development. Also, it may be relevant to further explore the variation in PGME in Europe to gain insight into the different underlying values that influence training in various European countries, to enhance implementation of training standards.

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Addendum

<u>Knowledge and skills in the phases of the clinical process</u>

To structure the outcomes of the Delphi procedure, all items have been described into the phases of the clinical process, identifying 5 phases. Each phase requires a more advanced integration of knowledge and skills concerning a topic. When training is completed, the trainee will have acquired the knowledge and skills for all phases and for all the topics at the level of independent practice.

The phases of performance are:

1. *Problem identification; to determine the need for (further) diagnostic evaluation or to recognize pathology.*
2. *a) Diagnosis; to diagnose **without** performance of a specific skill.*
   *b) Diagnosis; to diagnose **with** performance of a specific skill.*
3. *Information; to provide information and advice regarding the diagnosis and its implications.*
4. *Indication for treatment; to determine the indication for a specific treatment, taking in consideration all treatment options.*
5. *a) Treatment; to discuss all treatment options, determine the indication for a specific treatment, counsel about the treatment as well as providing the treatment **without** performance of a specific skill (conservative treatment).*
   *b) Treatment; to discuss all treatment options, determine the indication for a specific treatment, counsel about the treatment, as well as providing the treatment **with** performance of a specific skill (e.g. surgical treatment).*

If a trainee is able to provide a treatment with performance of a specific skill (5b), it is assumed that the trainee is also able to determine the indications for the treatment (4), perform counselling (3), perform diagnostic evaluation (2) and determine the indications for diagnostic evaluation.

Table 4: Core medical expertise outcomes of pan-European training in Obstetrics & Gynaecology.

A: General Medical Knowledge & Skills	
	The trainee has specific knowledge about embryology, anatomy and physiology of female genital organs and breasts.
	The trainee obtains patient and family history including social issues, performs accurate clinical examination of vital signs, the internal and external genitalia and the abdomen and interprets the findings adequately.
	The trainee is able to diagnose, assess, investigate, monitor and interpret data considering the most common obstetrical and gynaecological conditions. (conditions to be clarified per topic)
	The trainee undertakes timely and appropriate investigations like microbiological samples, laboratory investigations, and radiology imaging, interprets results in liaison with colleagues (e.g. radiologist) in relation to clinical findings to form a differential diagnosis.
	The trainee leads a ward round with a multidisciplinary view, manages admittance and discharge of patients at the ward and the delivery room and manages handover to another practice.
	The trainee is able to provide in basic therapeutic interventions, including safe and appropriate prescription and administration of oxygen, drugs and therapies, blood products, circulation support and urinary catheterisation.
	The trainee manages the assessment, prevention and treatment of pain.
	The trainee is able to recognise and triage the acutely ill patient and initiate adequate management, including the septic patient, patient with peripartum complications and the patient requiring resuscitation.
	The trainee maintains effective communication methods with patients and

	relatives, according the principles of shared decision making and informed consent, documents this accurately and maintains team work with effective communication within the health care team.	
	The trainee has specific knowledge about peri-operative care, including ASA-classification, indications and contra indications of surgeries, risks of surgeries, indications for blood transfusion, postsurgical complications and indications for admittance to the Intensive Care.	
	The trainee understands how gynaecological conditions influence sexual function, enquires about sexual function and possible negative sexual experiences, understands consequences of sexual violence on behaviour and gynaecological conditions.	
	The trainee has specific knowledge about embryology, anatomy and physiology of female genital organs and breasts.	
B: Prenatal Care		
Phase	*Knowledge*	*Skill*
2b	Embryonic & foetal viability	Transvaginal / transabdominal ultrasound
	Pregnancy location (intra or extra uterine)	Transvaginal / transabdominal ultrasound
	Pregnancy age	Transvaginal / transabdominal ultrasound
	Singleton or multiple pregnancy	Transvaginal / transabdominal ultrasound
	Cervical length	Transvaginal / transabdominal ultrasound
	Chorionicity	Transvaginal / transabdominal ultrasound
	Foetal biometry	Transvaginal / transabdominal ultrasound
	Foetal presentation	Transvaginal / transabdominal ultrasound
	Placental site	Transvaginal / transabdominal ultrasound
	Amniotic fluid volume	Transvaginal / transabdominal ultrasound
	Flow of arteria umbilicalis	Transabdominal Doppler flow measurement
3	Breastfeeding	
	Teen pregnancy	
	Pregnancy and obesity	
	Pregnancy and diabetes	
	Advanced maternal age pregnancies	
	Pregnancy and pre-existing hypertension	
	Use of medication (e.g. for psychiatric problems)	
	Cervical incompetence	
	Multiple gestation pregnancy	
	Intrahepatic cholestasis of pregnancy	
	Consequences of complicated delivery for a following pregnancy and delivery	
	Chromosomal abnormalities by interpreting: nuchal translucency / double test / triple test / amniocentesis / chorionic villus sampling / NIPT	

5a	Pregnancy of unknown location	
	Hyperemesis	
	(Recurrent) miscarriage	
	Vaginal blood loss in first trimester	
	Vaginal blood loss in second and third trimester	
	Second trimester pregnancy termination	
	Blood group incompatibility	
	Group B streptococcus carrier-ship	
	Abdominal complaints	
	(Minor) abdominal trauma in pregnancy	
	Malpresentation	
	Gestational diabetes	
	Oligohydramnios	
	Polyhydramnios	
	Hypertensive disorders of pregnancy (pregnancy-induced hypertension, pre-eclampsia, eclampsia, HELLP)	
	Reduced foetal activity	
	Foetal growth restriction	
	Premature rupture of membranes	
	Intrauterine foetal death	
	Postdate pregnancy	
	Perinatal infections (Toxoplasmosis, syphilis, varicella-zoster, parvovirus B19, rubella, cytomegalovirus, herpes)	
5b	Ectopic pregnancy	Laparoscopic removal of ectopic pregnancy (salpingostomy) or salpingectomy
	Early miscarriage	Dilatation and curettage by suction or blunt curette (according local and national protocols and legislation)
	First trimester termination of pregnancy	Dilatation and curettage by suction or blunt curette (according local and national protocols and legislation)
C: Intrapartum & Early Postpartum Care		
Phase	*Knowledge*	*Skill*
2a	Feasibility of labour	Physical examination
4	Post-partum haemorrhage; arterial embolization	
5a	Induction of pulmonary maturation	
	Premature contractions	
	Failure of progression of labour	
	Intrapartum fever	
	Meconium stained amniotic fluid	
	Peripartum pain	
	Postpartum mastitis (with abscess)	
	Endometriosis	
	Postpartum urinary retention	
	Thrombo-embolic process	
	Postpartum haemorrhage	
	Patient with medical history of caesarean section	

5b	Uncomplicated delivery	Perform uncomplicated delivery
	Complicated delivery	Perform preterm delivery
		Perform vacuum assisted vaginal delivery
		Perform assisted delivery using forceps[1]
		Perform breech delivery [1]
		Perform vaginal delivery of multiple pregnancy
		Perform (repeat) caesarean section, also in obese patient
	foetal distress	CTG monitoring
		Perform foetal scalp blood sampling[1]
		Perform episiotomy
		Perform emergency caesarean section
	Placental abruption	Perform emergency caesarean section
	Uterine rupture	Perform emergency caesarean section
	Shoulder dystocia	Perform all dystocia management manoeuvres
	Post-partum haemorrhage	Perform intrauterine balloon tamponade
		Perform surgical compression of atonic uterus (B-lynch suturing)[1]
	Retained placenta	Perform manual and surgical removal of placenta
	Uterine inversion	Perform manual uterine reversion[1]
	Genital tract trauma	Repair of genital tract trauma
	Vulvar hematoma	Evacuation of vulvar hematoma
	Episiotomy wound	Suturing of episiotomy wound
	$1^{st}/2^{nd}/3^{rd}$ degree perineal tears	Suturing of $1^{st}/2^{nd}/3^{rd}$ degree perineal tears
	4th degree perineal tears	Suturing of 4^{th} degree perineal tear[1]
	neonatal support	Support the initial care of the healthy/preterm new-born (with low Apgar scores)
		Perform resuscitation of the new-born accurately in the first 10 minutes after delivery (when awaiting the arrival of the paediatrician)
D: Benign Gynaecology		
Phase	***Knowledge***	***Skill***
2b	Vulvar abnormalities	Punch biopsy
	Intrauterine abnormalities	Diagnostic hysteroscopy & ultrasound
	Abnormalities of uterus and adnexa	Diagnostic laparoscopy & ultrasound
	Abnormalities of the ovary	Laparoscopic ovarian biopsy & ultrasound
4	Contraception in the healthy adult	
	Contraception in the patient with a health problem or concomitant disease	
	Laser vaporisation of condylomas	
	Laparoscopic treatment of endometriosis	
	Laparoscopic hysterectomy	
	Laparoscopic treatment of tubo-ovarian abscess	
	Vaginal hysterectomy	

	Hysteroscopic endometrial ablation or resection	
	Hysteroscopic sterilisation	
	Hysteroscopic myoma resection type 2 (< 3cm)	
	Hysteroscopic resection of vaginal septum	
5a	Sexually transmitted diseases in the adult	
	Pelvic inflammatory disease / salpingitis	
	Abdominal/pelvic pain	
	Premenstrual syndrome	
	Dysmenorrhea	
	Abnormal uterine bleeding	
	Menopausal complaints	
	Vaginitis/vaginal discharge	
	Vulvovaginitis	
	Uterine fibroids	
	Adnexal pathology	
	Endometriosis	
	Vulvar condylomas	
	Bartholin's cysts	
	Vulvar abscess	
5b	Contraception	Placement of diaphragm / cervical cap / Intra Uterine Device / Subcutaneous contraceptive implants
		Laparoscopic sterilisation
	Bartholin's cyst	Surgical marsupialisation of cyst
	Vulvar abscess	Surgical excision of abscess
	Ovarian cysts	Laparoscopic needle aspiration of simple cysts
		Laparoscopic electrocoagulation of the ovary
		Simple laparoscopic ovarian cystectomy
	Adnexal pathology	Laparoscopic salpingo-oophorectomy
		Salpingo-oophorectomy by laparotomy
	Intracavitary polyp	Hysteroscopic polyp resection
	Uterine myoma	Hysteroscopic myoma resection type 0-1 (< 4cm)
		Laparotomy with myomectomy of subserous myoma
		Abdominal hysterectomy
	pelvic adhesions	Simple laparoscopic adhesiolysis
		Laparotomy with minimal adhesiolysis and simple benign adnexal surgery
E: Reproductive Medicine		
Phase	*Knowledge*	*Skill*
1	Male and female subfertility and fertility assessment	
	Basic reproductive endocrinology and endocrine abnormalities that could lead to cycle disorders (primary amenorrhea, secondary amenorrhea, oligomenorrhoea, galactorrhoea, hyperprolactinemia, and hirsutism)	

	Fertility preservation techniques	
2a	Primary amenorrhea	
	Galactorrhoea	
2b	Subfertility; tubal patency	Diagnostic laparoscopy and hysterosalpingography with tubal testing
	Response to fertility treatment	Transvaginal ultrasound with follicle count and follicle measurements
	Ovarian Hyper Stimulation Syndrome	Transvaginal ultrasound with evaluation of follicles and intraperitoneal fluid
3	Prognostic factors for pregnancy in general	
	Probability of on-going pregnancy, spontaneous abortion and ectopic pregnancy with the different fertility treatments	
4	Assisted reproduction techniques (IUI, IVF, ICSI)	
5a	WHO-II cycle disorders; ovulation induction with clomiphene citrate	
	OHSS initial / emergency treatment	
F: Urogynaecology & Pelvic Floor		
Phase	*Knowledge*	*Skill*
1	Recognise need for referral to pelvic floor physiotherapist or other medical specialist.	
	Apical compartment prolapse	POP-Q score
	Anterior compartment prolapse	POP-Q score
	Posterior compartment prolapse	POP-Q score
	Fistula	physical examination
4	Anterior/posterior vaginal repair	
	Apical vaginal repair	
5b	Descensus uteri	Pessary fitting and on-going care
		Colpocleisis[1]
	Cystocele / urethrocele	Simple anterior vaginal repair
	Enterocele / rectocele	Simple posterior vaginal repair
G: Premalignancy		
Phase	*Knowledge*	*Skill*
1	Fragile elderly women with multiple co-morbidities and poly-pharmacy	
	Premalignant conditions of the vulva	
2b	Cervical screening	PAP smear
	(pre)malignant conditions of the cervix	Colposcopy (with biopsy)
5a	Premalignant gynaecological conditions	
5b	(pre)malignant conditions of the cervix	LLETZ of the cervix
		Conisation of the cervix
H: Gynaecology Oncology		
Phase	*Knowledge*	*Skill*
1	High stage gynaecological malignancies	
	Atypical grief reactions	
	Fragile elderly women with multiple	

	co-morbidities and poly-pharmacy	
2a	Vulvar and cervical carcinoma by evaluation of pathology results	
2b	Gestational trophoblastic disease	Transvaginal ultrasound
	(pre)malignant conditions of the endometrium	Endometrial biopsy
3	Ovarian carcinoma	
	Cervical carcinoma	
	Recurrence or progression of gynaecological oncological conditions	
I: Paediatric Gynaecology & Sexual Health		
Phase	*Knowledge*	*Skill*
1	Sexual dysfunction	
	Sexual abuse	
	Genital mutilation	
	Vaginal discharge in the child	
	Acute abdominal pain in the child	
	Sexually transmitted disease in the child	
	Trauma of the vulva, vagina, perineum and/or rectum in the child	
	Suspicion of domestic violence or child abuse	
2b	Gynaecological conditions in the child[2]	Adapt communication to the level of the child
		Perform accurate gynaecological examination of the child[2]
4	Contraception in the healthy adolescent	
5a	Sexually transmitted diseases in the adult, adolescent, prepubertal and peripubertal child	
5b	Trauma of the vulva/vagina/perineum/rectum in the child [2]	Emergency care of vulva/vagina/perineum/rectum
J: Breast disease		
Phase	*Knowledge*	*Skill*
1	Malignant breast disease	
	Genetic risks in malignant breast disease	
	Screening methods for breast disease	
2b	Galactorrhoea	Accurate examination of the breasts
	Mastalgia	Accurate examination of the breasts